IN THE CLAIMS:

1.-5. (Cancelled)

6. (Currently amended) A superconducting ceramic of the general formula

$(A_{1-x}B_x)_yCu_zO_w\cdot(A_{1-x'}B'_{x'})_{y'}Cu_{z'}O_{w'}$

in which $0.1 \leq x < 1$

$0.1 \leq x' < 1$

$y = 2.5\text{-}3.5$,

$y' = 2.5\text{-}3.5$,

$z = 1.5\text{-}3.5$,

$z' = 1.5\text{-}3.5$,

$w = 6.0\text{-}8.0$,

$w' = 6.0\text{-}8.0$,

A is one rare earth element and

each of B and B' ~~are two~~ is one or more alkaline earth elements,

wherein the superconducting ceramic has the stoichiometric formula $YbBaSrCu_3O_{6-8}$.

7. (Cancelled)

8. (Currently amended) A superconducting ceramic of the general formula

$(A_{1-x}B_x)_yCu_zO_w\cdot(A_{1-x'}B'_{x'})_{y'}Cu_{z'}O_{w'}$

in which $0.1 \leq x < 1$

$0.1 \leq x' < 1$

$y = 2.5\text{-}3.5$,

$y' = 2.5\text{-}3.5$,

$z = 1.5\text{-}3.5$,

$z' = 1.5\text{-}3.5$,

$w = 6.0\text{-}8.0$,

$w' = 6.0\text{-}8.0$,

A is one rare earth element and

each of B and B' ~~are two~~ is one or more alkaline earth elements,

wherein the superconducting ceramic has the stoichiometric formula ~~$YbBa_{0.7}Sr_{0.6}Ca_{0.6}Cu_3O_{6-8}$~~ $YbBa_{0.7}Sr_{0.7}Ca_{0.6}Cu_3O_{6-8}$.

9. (Cancelled)

10. (Currently amended) A superconducting ceramic of the general formula

$(A_{1-x}B_x)_yCu_zO_w$-$(A_{1-x'}B'_{x'})_{y'}Cu_{z'}O_{w'}$

in which $0.1 \leq x < 1$

$0.1 \leq x' < 1$

$y = 2.5\text{-}3.5$,

$y' = 2.5\text{-}3.5$,

$z = 1.5\text{-}3.5$,

$z' = 1.5\text{-}3.5$,

$w = 6.0\text{-}8.0$,

$w' = 6.0\text{-}8.0$,

A is more than one rare earth element and

each of B and B' ~~are two~~ is one or more alkaline earth elements,

wherein the superconducting ceramic has the stoichiometric formula $Y_{0.5}Yb_{0.5}BaSrCu_3O_{6-8}$.

11. (Currently amended) A superconducting ceramic of the general formula

$(A_{1-x}B_x)_yCu_zO_w$-$(A_{1-x'}B'_{x'})_{y'}Cu_{z'}O_{w'}$

in which $0.1 \leq x < 1$

$0.1 \leq x' < 1$

$y = 2.5\text{-}3.5$,

$y' = 2.5\text{-}3.5$,

$z = 1.5\text{-}3.5$,

$z' = 1.5\text{-}3.5$,

$w = 6.0\text{-}8.0$,

$w' = 6.0\text{-}8.0$,

A is more than one rare earth element and

each of B and B' ~~are two~~ is one or more alkaline earth elements,

wherein the superconducting ceramic has the stoichiometric formula $Y_{0.5}Yb_{0.5}BaCaCu_3O_{6-8}$.

12. – 38. (Cancelled)

39. (Currently amended) A superconducting ceramic of the general formula

$(A_{1-x}B_x)_yCu_zO_w\cdot(A_{1-x'}B'_{x'})_{y'}Cu_{z'}O_{w'}$

in which $0.1 \leq x < 1$

$0.1 \leq x' < 1$

$y = 2.5\text{-}3.5$,

$y' = 2.5\text{-}3.5$,

$z = 1.5\text{-}3.5$,

$z' = 1.5\text{-}3.5$,

$w = 6.0\text{-}8.0$,

$w' = 6.0\text{-}8.0$,

wherein A is one rare earth element, and

each of B and B' is one or more alkaline earth elements,

wherein A includes Yb,

B includes Ba and

B' includes Sr.

40. (Currently amended) A superconducting ceramic of the general formula

$(A_{1-x}B_x)_yCu_zO_w\cdot(A_{1-x'}B'_{x'})_{y'}Cu_{z'}O_{w'}$

in which $0.1 \leq x < 1$

$0.1 \leq x' < 1$

$y = 2.5\text{-}3.5$,

$y' = 2.5\text{-}3.5$,

$z = 1.5\text{-}3.5$,

$z' = 1.5\text{-}3.5$,

$w = 6.0\text{-}8.0$,

$w' = 6.0\text{-}8.0$,

wherein A is one rare earth element, and

each of B and B' is one or more alkaline earth elements,

wherein A includes Yb,

B includes Ba and

B' includes Sr and Ca.

41. (Currently amended) A superconducting ceramic of the general formula

$(A_{1-x}B_x)_yCu_zO_w\cdot(A_{1-x'}B'_{x'})_{y'}Cu_{z'}O_{w'}$

in which $0.1 \leq x < 1$

$0.1 \leq x' < 1$

$y = 2.5\text{-}3.5$,

$y' = 2.5\text{-}3.5$,

$z = 1.5\text{-}3.5$,

$z' = 1.5\text{-}3.5$,

$w = 6.0\text{-}8.0$,

$w' = 6.0\text{-}8.0$,

wherein A is one rare earth element, and

each of B and B' is one or more alkaline earth elements,

wherein A includes Y and Yb,

B includes Ba and

B' includes Sr.

42. (Currently amended) A superconducting ceramic of the general formula

$(A_{1-x}B_x)_yCu_zO_w\cdot(A_{1-x'}B'_{x'})_{y'}Cu_{z'}O_{w'}$

in which $0.1 \leq x < 1$

$0.1 \leq x' < 1$

$y = 2.5\text{-}3.5$,

$y' = 2.5\text{-}3.5$,

$z = 1.5\text{-}3.5$,

$z' = 1.5\text{-}3.5$,

$w = 6.0\text{-}8.0$,

$w' = 6.0\text{-}8.0$,

wherein A is one rare earth element, and

each of B and B' is one or more alkaline earth elements,

wherein A includes Y and Yb,

B includes Ba and

B' includes Ca.

43. - 44. (Cancelled)

45. (New) A superconducting ceramic having the stoichiometric formula $YbBaSrCu_3O_{6-\delta}$.

46. (New) A superconducting ceramic having the stoichiometric formula $YbBa_{0.7}Sr_{0.7}Ca_{0.6}Cu_3O_{6-\delta}$.

47. (New) A superconducting ceramic having the stoichiometric formula $Y_{0.5}Yb_{0.5}BaSrCu_3O_{6-\delta}$.

48. (New) A superconducting ceramic having the stoichiometric formula $Y_{0.5}Yb_{0.5}BaCaCu_3O_{6-\delta}$.

49. (New) A superconducting ceramic having the stoichiometric formula $Yb_{0.5}Gd_{0.5}Ba_2Cu_3O_{6-\delta}$.

50. (New) A superconducting ceramic having the stoichiometric formula $Yb_{0.5}Nd_{0.5}Ba_2Cu_3O_{6-\delta}$.